

Translation of PCT/EP2003/010104 claims as amended on July 01, 2004

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Claims

1. System for osteosynthesis, comprising:

a cervical vertebra plate (10) having at least two receiving openings (14) for the screw heads (18) of bone screws (16) for securing the cervical vertebra plate (10) to two cervical vertebrae, wherein the receiving openings (14) have a fluting (22), in particular a longitudinal fluting, about the periphery of a distal area, wherein the depth of the fluting (22) increases from the proximal to the distal, and  
a bone screw (18) having a screw head (16) and a threaded screw shank, wherein the outer periphery of the screw head (16) has a fluting (34), in particular a longitudinal fluting, wherein the fluting (34) has a varying depth along its length and the screw head (16) is substantially spherical, with the depth of the fluting (34) increasing from each pole towards the equator.

2. System according to claim 1, characterized in that the receiving openings (14) widen in a distal direction, in particular in a conical or dome-shaped fashion.
3. System according to any one of the preceding claims, characterized in that the fluting (22) is wedge-shaped.
4. System according to any one of the preceding claims, characterized in that four receiving openings (14) are provided which are located in the corner areas (12) of the cervical vertebra plate (10).

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5. System according to any one of the preceding claims, characterized in that a further receiving opening (14) is provided in the center of the cervical vertebra plate (10).
6. System according to any one of the preceding claims, characterized in that the fluting (22) is formed by wedge-shaped grooves (28) which extend in a substantially longitudinal direction, and the individual grooves (28) have a mutual separations with areas (30) without grooves therebetween.
7. System according to any one of the preceding claims, characterized in that the fluting (34) is formed by wedge-shaped grooves (36) which extend substantially in a longitudinal direction, individual grooves (36) being separated from each other.
8. System according to any one of the preceding claims, characterized in that, viewed in the peripheral direction, areas (38) without grooves are provided between the grooves (36) of the fluting (34).
9. System according to claim 8, characterized in that, viewed in the peripheral direction, the length of the area (38) without grooves corresponds to between 0.3 and 2.0, in particular 0.5 to 1.0 times the length of a groove (36).